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ABSTRACT

This report examines the significance of the ethnic composition of Dade County (Florida) high schools for the academic achievement and dropout rate of its students. The following statistical data were analyzed using multivariate analysis for all 76,830 students enrolled in grades 9-12 in 1989: (1) age; (2) sex; (3) grade; (4) ethnicity; (5) enrollment in English as a Second Language (ESL); (6) school identification; (7) reading and mathematics achievement test scores; and (8) dropout rates. The following findings are included: (1) a high concentration of Black students in a school is associated with an overall decrease in achievement; (2) a high concentration of Hispanic American students is associated with an overall gain in achievement; (3) Black students tend to have higher dropout rates in schools with a high concentration of Black students; and (4) Hispanic American students tend to have lower dropout rates in schools with a high concentration of Hispanic American students. Eighteen tables of statistical data are appended. (FMW)

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Introduction

The objective of this report is to assess the characteristics and performance of high school students in Dade County (Miami SMSA). More specifically, we examine the significance of school context (the ethnic composition of a particular school population) in affecting the school performance of high school students. Individual characteristics available in the data include age, sex, grade, ethnicity of the student, enrollment in English as a Second Language (ESL) courses, and school identification. Indicators of educational performance include reading scores, math competency scores, applied math scores, and dropout rates. The strength of the data is two-fold: First, the sample covers the universe of students in Dade County high schools; and, second, the information is of good quality, being based on reliable measures. The principal weakness is the dearth of information of respondents and their families that limits the possibilities for a thorough analysis of determinants of school performance.

Descriptive Profile

Data collection for this study took place during 1989 and encompassed the universe of students enrolled in Dade County (Miami SMSA) schools, grades 9 - 12. The data were made available by the Dade County School District, Office of Program Evaluation. Students' personal identities were deleted. The N is 76,830. Almost all of the students (97%) in the survey were between 15 and 19 years of age with the majority (51%) falling between ages 17 and 18. The sample is divided evenly into males and females.

Hispanics represent the largest ethnic group, numbering 33,783 (44%). Black students numbered 24,541 (32%) and Whites, 17,446 (23%). The universe also included 1060 students of Asian origin. The largest concentration of students in our survey are in the 9th grade and decreases with each grade up to grade 12. Students in the 9th grade represent 29 percent of the universe, 10th graders represent 27 percent, while 11th and 12th graders account for 24 and 20 percent of the students respectively.

Enrollment in English as a Second Language (ESL) courses is an indicator of recent immigration status and hence incomplete adaptation to the school environment. It is coded as a dichotomy, 1 for students who are enrolled in ESL courses and 0 for all others. A total of 7,472 students or approximately 10 percent of the sample were in the ESL program. The data also include dropout rates that represented 7 percent (5339) of all students. Variations by sex, grade, and ethnicity are discussed below. Learning scores are given in percentiles with higher scores representing better performance. Test score variations by ethnicity and sex are presented next.

School Achievements

Table 1 presents a breakdown of achievement scores available in the data by categories of ethnicity and sex. Taking the reading percentile scores as a whole, it is evident that Asian and White students outperform Hispanics and Blacks. Hispanic students scores are average while Black students are well below all other scores. Among all ethnicities, females perform consistently better than males although the differences are not large, ranging from one to four percentile points.

Scores from the math competency and applied math tests produce similar results. However, Asians do even better relative to other groups as compared to their performance on reading scores. Whites also do well, and Hispanics, once again, perform about average, while Blacks are over 10 points below the average. Sex does not affect significantly math competency and applied math scores and cross-gender differences are insignificant.

In addition to reading and math scores, we also made use of dropout status as a measure of school achievement. Table 2 presents dropout rates broken down by ethnicity and sex. The overall dropout rate in this universe, as reported by the School District, is quite low but there is significant variation across ethnic categories. In line with previous findings, Asian students were the least likely to dropout with an average rate of only 3 percent; Black and Hispanic rates approximately double this figure. Differences by grade, presented in Table 3, are consistently small although they indicate a marginal decline in dropping out between the earlier and later years. For Blacks, for example, the dropout rate declines by 2 percentage points between the 9th and 12th year; for Hispanics, the drop is just one percent.

Results so far show that Asian students perform better on the average than any other ethnic group. Asians do especially well in math achievement scores. Whites also perform above average although they do not have as high math scores as the Asians, nor do they have as low dropout rates. Hispanics, who comprise the largest ethnic group in the universe, have lower reading scores, math scores, and dropout rates. The Hispanic figures are close to the average for the School District, as a consequence of their weight in the population totals. Blacks, on the other hand, perform consistently worse than

average and their dropout rates are significantly above the mean. Determinants of these differences are analyzed below.

ESL Enrollment

As already noted, the data lack information on the key causal variables of parental background and student residential context. In their absence, we are compelled to explore other potential determinants of the sizable differences in school attainment for children of different ethnic backgrounds on the basis of the indirect indicators available in school records. One such variable is enrollment in the English as a Second Language Program which represents a plausible indicator of recent immigration status. It is possible that inter-ethnic differences in performance are partially accounted for the differential representation of recent immigrants in each group. This expectation is based on the assumption that recently-arrived immigrant children will not be able to perform as well on the average as their native-born or better assimilated peers.

Tables 4 presents the breakdown of recent immigration status, as operationalized through enrollment in the ESL program, by ethnicity and sex. Ten percent of all students in the universe made use of the program. Students classified as Hispanics had the highest utilization rate -- almost double the universe -- followed by Asians. Asians rates were about average, while those for Blacks were significantly below. White enrollment in the ESL Program was insignificant -- less than 1 percent. There is not much difference between boys and girls of various ethnicities as to whether they made use of the ESL program, except for Asians where the male rate of utilization was 3 percent higher than among females. Overall, these findings indicate that there are

indeed significant differences among ethnic groups in the extent to which they are formed by recent immigrants: The immigrant student population of Dade County comes overwhelmingly from Spanish-speaking countries; more than 3 in 4 of the 8145 students enrolled in the ESL Program were Hispanics. The 5 percent of Black students who attend ESL classes are probably Haitian children. The 10 percent rate of enrollment among Asian students falls between Hispanics and Blacks. However, the low absolute numbers of Asians make their representation in the total ESL student population insignificant. Only 1 percent of the ESL universe was formed by Asians.

Table 5 presents differences in ESL enrollment by grade for each ethnic group. For the universe as a whole, there is a monotonic decline in ESL utilization as one moves from the lower to the higher grades. This is a direct result of the decline in use among Spanish-origin students who make up the bulk of the ESL population. Rates among Black students remain approximately constant, while those for Asians exhibit some fluctuation with the same percent use in both the 9th and the 11th grade and lower rates in grades 10 and 12. It is not clear why this should be the case, except that the small number of Asians renders enrollment figures volatile.

Tables 6 and 7 present average test scores and dropout rates broken down by ESL status and ethnicity. As expected, recent immigrants do worse on the average than other students, especially in reading tests. They also drop out of school more frequently. These differences are observable in all ethnic categories: There is an approximate 30-point drop in reading scores associated with ESL status for Whites, Blacks, and Asians and a 20-point drop for Hispanics. Differences in math achievement scores are smaller, but still sizable. ESL enrollees are about twice more likely to drop out of school among

Asian students; differences are smaller but in the same direction among Blacks and Hispanics.

Given the observed differences in ESL enrollment among ethnic groups and the significant differences in school performance between recent immigrants and other students, it is plausible that some of the inter-ethnic differences in attainment noted above are due to the higher immigrant composition of some ethnic groups. As figures in Tables 6 and 7 show, this expectation is not borne out by the data. For example, the total gap in test scores between Whites and Hispanics shrinks by only 2 points when the sizable contingent of ESL students in the latter group is excluded. The gap between non-ESL Asian and Hispanic students hardly changes, as both groups increase their scores by roughly the same amount when recent immigrants are excluded. Differences in dropout rates also change imperceptibly. We conclude that while recent immigration, as represented by ESL enrollment, is associated with lower average school performance, it does not account for the observed inter-ethnic differences in test scores or dropping out.

School Contexts

The data lack detailed information about school characteristics, except their ethnic composition. Since students' ethnicity has proven to be the most powerful predictor of individual differences in achievement, we set out to examine whether the ethnic composition of school populations played a similar role. In other words, it is possible that regardless of the student's individual ethnicity, the school environment will have a significant influence on his/her achievement. For this analysis we created three

dichotomous variables corresponding to the ethnic composition of schools -- predominantly Hispanic, Black, or White. Asians were left out because they represent too small a group to dominate the ethnic composition of any school. To measure school ethnic concentration, we first calculated the average representation of each ethnicity in all Dade County high schools. Next, this average was compared to the ethnic composition of each school. Schools were assigned to either high or low concentration of each ethnicity according to whether they were above or below the county-wide average concentration. Each school was evaluated separately for all three variables. For example, knowing that Blacks comprised 31.9 percent, Hispanics 44 percent, and Whites 22.7 percent of all high school students in Dade County, if school 'x' had 37 percent Blacks, 15 percent Hispanics, and 48 percent Whites, it would be coded "high" in Black School, "low" in Hispanic School, and "high" in White School.

Table 8 presents the breakdown of student reading and math test scores by ethnicity of respondents and school ethnic composition. Results of this preliminary exercise reveal some telling differences between schools. Not surprisingly, given the individual association between ethnicity and school performance, predominantly White schools have the highest average test scores and predominantly Black schools the lowest. However, the important finding is that students of any ethnicity do considerably better in mostly White schools. For example, Black students average a 7-point gain by being enrolled in such schools as compared with mostly Black schools. White student scores drop by 6 to 15 points on the average when they are enrolled in the latter type of schools.

Enrollment in predominantly Hispanic schools is also associated with lower test scores for all students, including Hispanics, but the decline is not as steep as between White and Black schools and that there are even some reversals. Asian students, in particular, seem to do as well in Hispanic as in White contexts. Regardless of school type, the differences among individual ethnic categories hold. Hence, while Asians in predominantly Black schools do much worse than elsewhere, they still have higher math test scores than all other groups. Hispanic and Black students continue to score significantly lower in all school contexts.

Table 9 presents the obverse of this picture by showing average reading and math scores for students enrolled in schools with low concentrations of the different ethnic groups. The story is unsurprisingly similar. Scores in non-white schools are lowest on the average and so they are for students in every ethnic category. All students achieve higher reading and math scores in schools which have an underrepresentation of Blacks. Asians and Whites fare better in all school contexts, Hispanics continue to occupy an intermediate position, but do better in non-Black schools than elsewhere.

It is possible to examine further these contextual differences by breaking down school ethnic composition into more refined categories. For this purpose, we constructed two new trichotomous variables defined by concentrations of 75 percent or more, 40 to 74 percent, and less than 40 percent of the respective ethnic groups. These categories were designated "high", "medium", and "low" respectively. For this analysis, we looked only at Black and Hispanic ethnic concentrations.

Table 10 presents the data for reading and math test scores by ethnicity and three levels of Black student concentration. For all ethnic categories there is an invariable

monotonic relationship -- the greater the Black student concentration, the lower the average test scores. As the ratio of Black students to the total student body decreases, reading and math test scores increase for all ethnicities -- including Blacks themselves. The hierarchy of individual ethnic differences remains the same across all school contexts.

The data for Hispanic student concentration tells a slightly different story. Table 11 shows that, for the most part, average scores do not change as dramatically for varying levels of Hispanic student concentration as for Black. The relationship is in fact non-monotonic. For all ethnic groups, intermediate levels of Hispanic concentration (between 40 to 74 percent) actually raises test scores relative to schools with low (less than 40 percent) Hispanic presence. A possible explanation is that schools with under 40 percent Hispanic students are probably dominated by Blacks since they are the second largest ethnic group in this student population. As seen above, predominantly Black school contexts are associated with lower test scores.

These results provide us with a more nuanced view of how ethnicity and ethnic composition of schools combine to produce different attainment experiences for students. It is not only the individual's ethnic identity but also the context in which she or he interacts that affects her/his school achievement. Clearly, effects of ethnicity at the individual and contextual levels are confounded with those of socio-economic status, but the present findings say, at a minimum, that the social environment in which students become incorporated can have a significant effect on learning outcomes after controlling for individual characteristics.

Table 12 further illustrates this conclusion with dropout rates broken down by ethnicity and three levels of Black and Hispanic student concentration. There is significant variation across school contexts, but it does not follow the pattern discussed above. Dropping out does not "behave" like test scores. Surprisingly, dropout rates for all ethnic groups increase as Black and Hispanic student concentration decreases. In particular, Black and Hispanic dropout rates are highest in schools with the lowest concentration of their respective groups. Taken at face value, these results indicate that leaving school is a distinct process, not assimilable to that leading to various levels of academic performance. The very high ethnic concentration that leads to a downward trend in test scores might simultaneously "protect" students from quitting school.

Conversely, Hispanics and Blacks who find themselves isolated among students from a different ethnic background might get more easily discouraged. This possibility also bears on the higher levels of performance found among Blacks and Hispanics attending predominantly White schools. These are probably "survivors" of a selection process that saw those minority students who could not "catch up" with their peers in more demanding school environments leave. Predominantly minority schools may not be subject to such high standards and hence their student populations would be less subject to the discouraging effects of falling behind.

Multivariate Analysis

The final step of the analysis consists of examining the simultaneous effects of predictors on academic achievement and dropout rates in a multivariate framework. The vector of independent variables for this analysis includes grade level, age, sex,

ethnicity, ESL status, and contextual ethnicity. Age is coded in years. Sex is 1 if the student is female, 0 otherwise. ESL is 1 if the student currently participates in the Program, 0 otherwise. Individual ethnicity is a set of dummy variable with White as the excluded category. Table 13 summarizes results of OLS regressions of students' reading and math test scores on individual-level predictors. The regression models account for over 25 percent of the variance in reading and applied math scores and for 20 percent in math competency scores. Because the data are drawn from the universe and not from a sample of students, tests of significance are not appropriate since all differences detected are, by definition, real. We use significance levels as an indicator of the relative strength of observed effects, as indicated by the relationship between each coefficient and its respective standard error. The large number of cases on which coefficients are computed makes most, in any event, significant.

When we look at these individual regression coefficients a number of interesting results appear nevertheless. Results in Table 13 indicate that test scores increase with grade-level, but decrease with age. This pattern suggests lower achievement levels for older students within each grade. ESL enrollment has a net negative association with all test scores. As could be expected, this association is strongest for reading achievement. The largest effects on each endogenous variable are, however, those associated with ethnicity. Relative to the omitted category (Whites), Black ethnicity is associated with a 20-point plus reduction in each standardized test; Hispanic ethnicity also reduces scores by between 7 and 12 points. Congruent with earlier results, Asian ethnicity has a negligible effect on reading scores, but affects math scores strongly. Controlling for other variables, Asian students outperform Whites by between 6 and 9 points.

The next question is whether school context affects academic achievement, after taking into account individual-level factors. To answer this question, we first added a trichotomous variable to the above list of predictors. Black School is coded 0 if the school population is less than 40 percent Black; 1 if between 40 to 70 percent; and 2 if more than 70 percent. Results are presented in Table 14. Even after controlling for individual ethnicity and other factors, school context continues to affect test scores. The corresponding coefficients are very strong, exceeding by approximately 15 times their respective standard errors. These coefficients show that, net of all other predictors, each step in our three-point index of Black concentration reduces test scores by approximately 5 points. The model accounts for a higher proportion of the variance than the previous one (Table 13): almost 30 percent for reading scores, and 22 and 28 percent for math competency and applied math scores, respectively.

Next, we examine the effect of Hispanic concentration on reading and math scores after controlling for individual-level variables. In this case, the contextual variable was coded as a dichotomy : 1 if the school was more than 50 percent Hispanic and 0 otherwise. Results are presented in Table 15. Contrary to the above findings, effects of Hispanic school concentration on all test scores are not negative, but positive. Taken at face value, these results suggest that, net of other variables, attending a predominantly Hispanic school environment raises test scores by between 5 and 8 points. A more plausible explanation, however, is that Hispanic schools are those that are not predominantly Black and hence results are the obverse of those obtained for Black school context above. Supporting this conclusion is the fact that variance explained by the models in Table 15 are almost identical to those obtained when school context is

operationalized by Black concentration (Table 14).

The next step consists of examining how Hispanic and Black school contexts differ in their effects on student dropout rates. Since the dependent variable -- quitting school -- is a dichotomy, the model cannot be suitably estimated by least-squares techniques. Instead, we made use of logistic regression. Logistic coefficients show the incremental effect of each unit change in a predictor variable on the logarithm of the odds (log-odds) of dropping out. Since these figures are not readily interpretable, effects which exceed at least twice their standard errors are transformed into actual probabilities of leaving school. These probabilities are estimated at the mean population value of the dependent variable.

Table 16 reports the effects of individual predictors on dropping out. In line with our previous findings, "Asian-ness" decreases the probability of quitting school by 7.8 percent after controlling for other variables. Age is also negatively associated with dropping out: as the student's age increases, the probability of dropping out decreases with each additional year leading to a decline of about 10 percent. Grade level also affects the probability of leaving school in the same direction and by about the same amount. Hispanics are also somewhat less likely to dropout of school than the omitted category (Whites) and so are recent immigrants, net of other variables. These results again indicate that leaving or remaining in school does not belong to the same family of variables as achievement scores since it is affected by a different constellation of factors.

Table 17 presents a second logistic regression predicting effects on the log-odds of dropping out of school for Black students only on the basis of the same individual predictors plus level of concentration of their own ethnic group. The contextual variable

in this case is a dichotomy where 0 equals a Black student population at or below the system-wide proportion and 1 equals a higher figure. This contextual variable exercises a weak net effect on the propensity of dropping out of Black students. However, the direction of the effect is positive with higher Black concentrations leading to a marginally greater tendency toward quitting school.

The opposite result holds for Hispanic students. In this instance, the coefficient is negative, indicating that higher concentration of co-ethnics leads to a greater probability of staying in school. The relevant figures, presented in Table 18, show that the Hispanic context effect is very strong, exceeding 8 times its standard error and leading to a net 7 percent decline in the probability of dropping out. Hence, the benign effect of co-ethnic concentration, observed in the tabular results above, holds only for Hispanics when other variables are taken into account. It is in this group where being among their own seems to discourage students from quitting; for Black students, the effect dissipates after controlling for other variables.

Conclusions

These findings provide insight into the reasons why students of different and similar ethnic backgrounds have varying rates of academic performance and dropping out. Ethnicity of the student and ethnic composition of the school are the most significant predictors of educational attainment in our study. The data show the significant effect of the social environment in which students become inserted on learning outcomes, net of individual predictors. Results are amenable, however, to several unwarranted interpretations. The consistent differences in academic

performance in favor of some ethnic groups and against others may suggest the existence of innate differences in ability where none exists. Such interpretations would be improper because of the absence of relevant predictor variables in the data. These variables include, first and foremost, parental socio-economic status, but also encompass others found relevant in the educational attainment literature such as parental aspirations, the student's social relationships in and out of school, and the socio-economic character of the area of residence. Until such variables are taken into account, there is little that we can say with certainty about the causal structure of student attainment in Dade County schools.

A second limitation of the data is the imprecision of the ethnic categories. In particular, the largest groups -- Hispanics -- is composed of individuals from many different national origins and of recent immigrants as well as the native-born. The use of ESL enrollment to get at these differences represents only an initial approximation. There are indications that well assimilated native-born children, such as offspring of middle-class Cuban exile families, are often classified as Whites. The effect is to lower the average performance scores of the remaining Hispanics, exacerbating differences with the White group. Similarly, there is no way of knowing how students from different Latin American nationalities whose backgrounds and immigration histories are quite distinct vary in academic performance. To a lesser extent because of their much smaller numbers, such variations should also be present among Asian-origin students.

With these limitations, the present report must be interpreted exclusively as a descriptive presentation of the available information for this population. Aside from whatever the constellation "ethnic group" means in terms of underlying causal factors,

the most significant results are the independent net effects of school context on academic achievement, the role of recent immigration status, and the difference between test scores and dropping out as indicators of attainment. The pattern of associations with the latter variable is, at times, counterintuitive and deserves attention in future analyses.

TABLE 1

READING AND MATH TEST SCORES BROKEN DOWN BY ETHNICITY AND SEX

Reading Percentile:

	Asian (N=615)	Black (N=14169)	Hispanic (N=16815)	White (N=10317)	Total (N=41916)
Female	66.26	38.84	50.34	67.85	55.82 (21517)
Male	62.86	34.15	49.32	65.13	52.87 (20399)
Total	64.55	36.64	49.84	66.49	54.38

Math Comp Percentile:

	Asian (N=616)	Black (N=14103)	Hispanic (N=16783)	White (N=10315)	Total (N=41817)
Female	77.03	44.62	57.18	69.95	62.20 (21496)
Male	76.96	42.37	57.82	70.58	61.93 (20321)
Total	76.99	43.56	57.49	70.27	62.07

Math Applied Percentile:

	Asian (N=953)	Black (N=5082)	Hispanic (N=5970)	White (N=3524)	Total (N=15529)
Female	71.22	33.88	49.29	65.62	55.00 (7543)
Male	74.51	34.74	54.62	69.50	58.34 (7986)
Total	72.74	34.29	51.96	67.53	56.67

TABLE 2

DROPOUT STATUS BROKEN DOWN BY ETHNICITY AND SEX

	% Asian	% Black	% Hispanic	% White	% Total
Female	3.35	7.13	5.84	4.49	5.20 (34143)
Male	2.95	9.37	7.37	6.48	6.54 (35215)
Total	3.15 (953)	8.24 (23328)	6.63 (27765)	5.52 (17312)	5.89 (69358)

TABLE 3

DROPOUT STATUS BROKEN DOWN BY ETHNICITY AND GRADE (PERCENT DROPPED OUT)

	% Asian	% Black	% Hispanic	% White	% Totals
Grade 9	3.1	8.7	7.3	6.1	6.3 (1675)
Grade 10	3.7	8.8	7.3	6.3	6.5 (1582)
Grade 11	4.4	8.2	6.0	5.2	6.0 (1199)
Grade 12	2.3	6.8	6.3	4.5	5.0 (883)
Total	3.4 (35)	8.1 (2116)	6.7 (2226)	5.5 (962)	6.0 (5339)

TABLE 4

ESL STATUS BROKEN DOWN BY ETHNICITY AND SEX
(PERCENT ENROLLED IN PROGRAM)

	% Asian	% Black	% Hispanic	% White	% Totals
Female	8.6	5.1	17.3	0.6	7.9 (37696)
Male	11.5	4.8	18.3	0.9	8.9 (39134)
Totals	10.05	5.0	17.8	0.8	8.4
	(1060)	(24541)	(33783)	(17446)	(76830)

TABLE 5

ESL STATUS BROKEN DOWN BY ETHNICITY AND GRADE
(PERCENT ENROLLED IN PROGRAM)

	% Asian	% Black	% Hispanic	% White	% Totals
Grade 9	12.5	5.3	21.5	1.0	10.1 (22397)
Grade 10	9.2	4.9	18.1	0.9	8.3 (21027)
Grade 11	12.5	4.6	15.7	0.6	8.4 (18343)
Grade 12	6.5	4.8	13.8	0.7	6.5 (14972)
Totals	10.2	4.9	17.3	0.6	8.3
	(1060)	(24541)	(33783)	(17446)	(76830)

TABLE 6

READING AND MATH TEST SCORES BROKEN DOWN BY ETHNICITY AND ESL STATUS*

READING SCORES

	White	Asian	Black	Hispanic
NO ESL	66.49	64.55	36.64	49.84
	(10317)	(615)	(14169)	(16815)
ESL	36.59	36.92	14.33	28.54
	(80)	(62)	(678)	(2944)
Total	66.26	62.02	35.62	46.67
	(10397)	(677)	(14847)	(19758)

MATH COMP SCORES

	White	Asian	Black	Hispanic
NO ESL	70.27	76.99	43.56	57.49
	(10315)	(616)	(14103)	(16783)
ESL	53.85	70.66	27.70	44.61
	(79)	(62)	(681)	(2939)
Total	70.14	76.41	42.83	55.57
	(10394)	(678)	(14784)	(19722)

APPLIED MATH SCORES

	White	Asian	Black	Hispanic
NO ESL	67.53	72.74	34.29	51.96
	(3524)	(195)	(5082)	(5970)
ESL	48.97	55.85	19.30	37.62
	(31)	(20)	(233)	(1036)
Total	67.37	71.17	33.63	49.84
	(3555)	(215)	(5315)	(7006)

* Absolute cell frequencies in parentheses

TABLE 7

DROPOUT STATUS BROKEN DOWN BY ETHNICITY AND ESL STATUS*

	White	Asian	Black	Hispanic
NO ESL	5.5	3.2	8.2	6.6
	(17312)	(953)	(23328)	(27765)
ESL	8.7	5.6	8.7	7.8
	(134)	(107)	(1213)	(6018)
Total	5.5	3.4	8.3	6.8
	(17446)	(1060)	(24541)	(33783)

* Absolute cell frequencies in parentheses

TABLE 8

READING AND MATH SCORES BROKEN DOWN BY ETHNICITY OF RESPONDENT AND BY ETHNIC COMPOSITION OF THE SCHOOL POPULATION - I.

HIGH ETHNIC CONCENTRATION

READING SCORES

Student Ethnicity	White School	Black School	Hispanic School
White	68.16 (8290)	60.36 (2445)	66.06 (3408)
Asian	64.26 (489)	56.05 (195)	63.06 (286)
Black	40.38 (4720)	34.00 (11129)	36.51 (2767)
Hispanic	50.55 (6285)	40.07 (3555)	46.86 (15079)
Total	55.84 (19784)	39.21 (17324)	48.79 (21540)

MATH COMP SCORES

	White School	Black School	Hispanic School
White	71.91 (8287)	65.11 (2445)	70.21 (3400)
Asian	78.23 (490)	72.49 (196)	78.89 (286)
Black	48.08 (4721)	41.43 (11069)	43.34 (2764)
Hispanic	57.66 (6261)	48.46 (3548)	56.44 (15053)
Total	61.86 (19759)	46.58 (17258)	57.23 (21503)

APPLIED MATH SCORES

	White School	Black School	Hispanic School
White	70.09 (2794)	55.62 (566)	65.58 (1055)
Asian	71.81 (150)	65.24 (59)	72.59 (76)
Black	39.92 (1539)	32.35 (4039)	31.41 (912)
Hispanic	53.45 (2168)	41.59 (1231)	50.25 (5165)
Total	57.73 (6651)	36.84 (5895)	50.34 (7208)

TABLE 9

READING AND MATH SCORES BROKEN DOWN BY ETHNICITY OF RESPONDENT AND BY ETHNIC COMPOSITION OF THE SCHOOL POPULATION - II.

LOW ETHNIC CONCENTRATION

READING SCORES

Student Ethnicity	Non-White School	Non-Black School	Non-Hispanic School
White	58.79 (2107)	68.07 (7952)	66.35 (6989)
Asian	56.20 (188)	64.44 (482)	61.27 (391)
Black	33.40 (10127)	40.48 (3718)	35.42 (12080)
Hispanic	44.86 (13474)	48.11 (16204)	46.03 (4680)
Total	41.59 (25896)	52.99 (28356)	46.85 (24140)

MATH COMP SCORES

	Non-White School	Non-Black School	Non-Hispanic School
White	63.19 (2107)	71.69 (7949)	70.10 (6994)
Asian	71.69 (188)	78.01 (482)	74.60 (392)
Black	40.37 (10063)	47.01 (3715)	42.71 (12020)
Hispanic	54.60 (13461)	57.13 (16174)	52.79 (4669)
Total	49.88 (25819)	60.25 (28320)	53.15 (24075)

APPLIED MATH SCORES

	Non-White School	Non-Black School	Non-Hispanic School
White	57.37 (761)	69.59 (2989)	68.13 (2500)
Asian	69.68 (65)	73.41 (156)	70.39 (139)
Black	31.07 (3776)	37.69 (1276)	34.09 (4403)
Hispanic	48.22 (4838)	51.59 (5775)	48.69 (1841)
Total	42.24 (9440)	55.47 (10196)	47.26 (8883)

TABLE 10

READING AND MATH TEST SCORES BY ETHNICITY AND THREE LEVELS OF BLACK STUDENT CONCENTRATION

BLACK STUDENT CONCENTRATION

READING SCORES

Student Ethnicity	High (75% or More)	Medium (40% to 75%)	Low (Less than 40%)
White	57.03 (218)	58.97 (1590)	67.84 (8589)
Asian	50.23 (35)	54.79 (116)	64.40 (526)
Black	32.76 (7137)	35.80 (3483)	40.29 (4227)
Hispanic	37.71 (730)	40.29 (2614)	48.08 (16415)
Total	33.93 (8120)	42.31 (7803)	52.97 (29757)

MATH COMP SCORES

	High	Medium	Low
White	58.55 (218)	63.26 (1589)	71.71 (8587)
Asian	60.63 (35)	72.06 (117)	78.43 (526)
Black	39.75 (7077)	43.87 (3482)	47.14 (4225)
Hispanic	44.88 (727)	49.04 (2610)	57.09 (16385)
Total	40.81 (8057)	49.97 (7798)	60.28 (29723)

APPLIED MATH SCORES

	High	Medium	Low
White	57.72 (112)	55.10 (454)	69.60 (2989)
Asian	64.75 (12)	65.36 (47)	73.41 (156)
Black	30.86 (2724)	35.42 (1315)	37.69 (1276)
Hispanic	40.17 (329)	42.11 (902)	51.59 (5775)
Total	32.90 (3177)	41.44 (2718)	55.47 (10196)

TABLE 11

READING AND MATH TEST SCORES BY ETHNICITY AND THREE LEVELS OF HISPANIC STUDENT CONCENTRATION - II.

HISPANIC STUDENT CONCENTRATION

READING SCORES

Student Ethnicity	High (75% or More)	Medium (40% to 75%)	Low (Less than 40%)
White	58.88 (920)	69.18 (2734)	66.08 (6743)
Asian	58.18 (96)	65.98 (209)	60.79 (372)
Black	33.86 (382)	37.25 (2420)	35.35 (12045)
Hispanic	46.69 (8907)	47.53 (6370)	45.40 (4482)
Total	47.41 (10305)	50.78 (11733)	46.42 (23642)

MATH COMP SCORES

	High	Medium	Low
White	65.48 (922)	72.14 (2724)	69.97 (6748)
Asian	77.04 (96)	80.03 (209)	74.23 (373)
Black	42.57 (382)	43.61 (2417)	42.69 (11985)
Hispanic	56.88 (8900)	56.06 (6351)	52.28 (4471)
Total	57.31 (10300)	57.66 (11701)	52.81 (23577)

APPLIED MATH SCORES

	High	Medium	Low
White	60.83 (287)	69.35 (1010)	67.32 (2258)
Asian	74.68 (31)	73.09 (64)	69.23 (120)
Black	31.77 (97)	32.26 (850)	33.94 (4368)
Hispanic	51.26 (3194)	50.10 (2168)	46.72 (1644)
Total	51.70 (3609)	51.51 (4092)	45.93 (8390)

TABLE 12

DROPOUT STATUS BY ETHNICITY AND BY THREE LEVELS OF BLACK AND HISPANIC STUDENT CONCENTRATION

BLACK STUDENT CONCENTRATION:

	High	Medium	Low
White	.0517 (271)	.0417 (1821)	.0571 (15354)
Asian	.0000 (41)	.0157 (127)	.0381 (892)
Black	.0393 (8148)	.0265 (4041)	.1296 (12352)
Hispanic	.0824 (898)	.0411 (3333)	.0710 (29552)
Total	.0436 (9358)	.0345 (9322)	.0793 (58150)

HISPANIC STUDENT CONCENTRATION:

	High	Medium	Low
White	.0245 (1062)	.0330 (3058)	.0630 (13326)
Asian	.0196 (102)	.0179 (224)	.0409 (734)
Black	.0281 (462)	.0271 (2808)	.0912 (21271)
Hispanic	.0267 (10861)	.0332 (7926)	.1170 (14996)
Total	.0265 (12487)	.0317 (14016)	.0907 (50327)

TABLE 13

OLS REGRESSIONS OF 1989 READING AND MATH TEST SCORES ON INDIVIDUAL PREDICTORS, DADE COUNTY HIGH SCHOOL STUDENTS

	Reading Scores		Math Comp Scores		Math Applied Scores	
Predictor	B	SE	B	SE	B	SE
Black	-27.325*	.542	-21.576*	.558	-29.776*	.573
Grade	18.671*	6.588	23.011*	6.785	16.840*	6.966
Female	-.966*	.393	-.937*	.404	5.454*	.415
Asian	-.917	1.732	9.775*	1.784	6.047*	1.832
ESL Enrolled	-18.025*	.737	-6.412*	.759	-9.975*	.779
Age	-11.455*	.265	-10.872*	.273	-11.487*	.280
Hispanic	-12.716*	.525	-7.007*	.541	-12.184*	.555
Intercept	78.597		29.465		88.503	
R^2	.289		.207		.269	
N	16004					

* = p < .01

1. Unstandardized regression coefficients.

TABLE 14

OLS REGRESSIONS OF 1989 READING AND MATH TEST SCORES ON INDIVIDUAL PREDICTORS AND BLACK SCHOOL CONTEXT, DADE COUNTY HIGH SCHOOL STUDENTS

	Reading Scores		Math Comp Scores		Math Applied Scores	
Predictor	B	SE	B	SE	B	SE
Black	-22.294*	.631	-16.021*	.649	-24.793*	.668
Grade	18.988*	6.541	23.361*	6.729	17.154*	6.922
Female	-.994*	.390	-.967*	.401	5.427*	.413
Asian	-.298	1.720	10.458*	1.770	6.660*	1.821
ESL Enrolled	17.850*	.731	-6.219*	.752	-9.802*	.774
Age	-11.269*	.263	-10.666*	.271	-11.302*	.278
Hispanic	-12.653*	.522	-6.938*	.537	-12.121*	.552
Black School	-4.709*	.309	-5.200*	.318	-4.664*	.327
Intercept	73.810		24.179		83.761	
R^2	.299		.220		.279	
N	16004					

* = p < .01

1. Unstandardized regression coefficients

TABLE 15

OLS REGRESSIONS OF 1989 READING AND MATH TEST SCORES ON INDIVIDUAL PREDICTORS AND HISPANIC SCHOOL CONTEXT, DADE COUNTY HIGH SCHOOL STUDENTS

	Reading Scores		Math Comp Scores		Math Applied Scores	
Predictor	B	SE	B	SE	B	SE
Black	-25.271*	.575	-19.752*	.593	-27.015*	.607
Grade	18.255*	6.566	22.641*	6.769	16.281*	6.928
Female	-1.012*	.391	-.977*	.403	5.393*	.413
Asian	.190	1.730	10.758*	1.783	7.534*	1.825
ESL Enrolled	-17.885*	.734	-6.288*	.757	-9.788*	.775
Age	-11.313*	.264	-10.746*	.272	-11.296*	.279
Hispanic	-10.569*	.562	-5.100*	.580	-9.298*	.593
Hispanic School	6.090*	.583	5.411*	.601	8.185*	.616
Intercept	77.556		28.540		87.104	
R^2	.294		.211		.277	
N	16004					

* = $p < .01$

1. Unstandardized regression coefficients.

TABLE 16

LOGISTIC REGRESSION PREDICTING EFFECTS ON THE LOG-ODDS OF DROPPING OUT OF SCHOOL OF SELECTED PREDICTORS, DADE COUNTY, 1989

Predictors	B	SE	Δ P
Female	.014	.015	
Asian	-.317*	.088	-.0781
Black	.026	.021	
Hispanic	-.057*	.021	-.0142
Age	-.409*	.007	-.1000
ESL Enrollee	-.180*	.025	-.0447
Grade	-.406*	.009	-.0993

Intercept	37.251
Mean, Dropout Rate	.0684
N	76830

* = p <.05

TABLE 17

LOGISTIC REGRESSION PREDICTING EFFECTS ON THE LOG-ODDS OF DROPPING OUT OF SCHOOL FOR BLACK STUDENTS OF SELECTED PREDICTORS AND LEVEL OF CONCENTRATION OF THEIR OWN GROUP, DADE COUNTY, 1989

Predictors	B	SE	Δ P
Female	-.084	.045	
Age	.450*	.021	.1114
ESL Enrollee	-.513*	.103	-.1243
Grade	-.440*	.034	-.1073
Black School	.088	.053	

Intercept	.0650
Mean, Dropout Rate	.0684
N	17052

* = p <.05

TABLE 18

LOGISTIC REGRESSION PREDICTING EFFECTS ON THE LOG-ODDS OF DROPPING OUT OF SCHOOL FOR HISPANIC STUDENTS OF SELECTED PREDICTORS AND LEVEL OF CONCENTRATION OF THEIR OWN GROUP, DADE COUNTY, 1989

Predictors	B	SE	Δ P
Female	-.052	.036	
Age	.327	.019	
ESL Enrollee	-.018	.045	
Grade	-.303*	.029	-.0747
Hispanic School	-.267*	.039	-.0660
Intercept	1.0260		
Mean, Dropout Rate	.0684		
N	24122		

* = p <.05